IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): An aqueous polymer dispersion based on copolymers of vinylaromatics and butadiene, which is obtainable by free radical copolymerization of

(a) from 0.1 to 99.9% by weight of styrene and/or methylstyrene,

(b) 0.1-99.9% by weight of 1,3-butadiene and/or isoprene and

(c) from 0 to 40% by weight of other ethylenically unsaturated copolymerizable monomers, the sum of the monomers (a), (b) and (c) always being 100%,

in the presence of from 10 to 40% by weight, based on the monomers used, of at least one degraded starch having a molecular weight Mn of from 500 to 40,000 and of water-soluble redox catalysts, the redox catalyst used being a combination of hydrogen peroxide and at least one heavy metal salt from the series consisting of the cerium, manganese and iron(II) salts.

Claim 2 (Original): An aqueous polymer dispersion as claimed in claim 1, wherein a mixture of (a) styrene and (b) 1,3-butadiene is used in the copolymerization.

Claim 3 (Previously Presented): An aqueous polymer dispersion as claimed in claim 1, which has a solids content of from 10 to 50%.

Claim 4 (Previously Presented): An aqueous polymer dispersion as claimed in claim 1, wherein the copolymers have a particle size of from 40 nm to 2 mm.

Claim 5 (Previously Presented): A process for the preparation of aqueous copolymer dispersions based on vinylaromatics and butadiene by copolymerization of vinylaromatics

and butadiene in an aqueous medium in the presence of starch and water-soluble redox catalysts, wherein

(a) from 0.1 to 99.9% by weight of styrene and/or methylstyrene,

(b) 0.1-99.9% by weight of 1,3-butadiene and/or isoprene and

(c) from 0 to 40% by weight of other ethylenically unsaturated copolymerizable monomers

are used in the copolymerization, the sum of the monomers (a), (b) and (c) always being 100%, the copolymerization being carried out in the presence of from 10 to 40% by weight, based on the monomers used, of at least one degraded starch having a molecular weight Mn of from 500 to 40,000 and the redox catalyst used being a combination of hydrogen peroxide and at least one heavy metal salt from the series consisting of the cerium, manganese and iron(II) salts.

Claim 6 (Original): A process as claimed in claim 5, wherein a monomer mixture comprising

(a) from 50 to 99% by weight of styrene and/or methylstyrene,

(b) from 1 to 50% by weight of butadiene and/or isoprene and

(c) from 0 to 40% by weight of other ethylenically unsaturated copolymerizable monomers

is in an aqueous solution of an enzymatically degraded natural starch with a redox catalyst comprising hydrogen peroxide and heavy metal ions from the group consisting of the cerium, manganese and iron(II) salts.

Claim 7 (Previously Presented): A process as claimed in claim 5, wherein the copolymerization is carried out in the presence of a complexing agent for iron in concentrations from 1 to 5 mol per mole of iron salt.

Claim 8 (Previously Presented): A method for sizing comprising applying an aqueous polymer dispersion as claimed in claim 1 as an engine size and/or surface size for paper, board and cardboard.

Claim 9 (New): The aqueous polymer dispersion as claimed in Claim 4 wherein the copolymers have a particle size of from 40 nm to 120nm.

Claim 10 (New): The aqueous polymer dispersion as claimed in Claim 1 wherein the mean particle size of the dispersed polymer particles is from 50 to 100 nm.

Claim 11 (New): Graphic arts paper produced by a method comprising sizing of the paper with the aqueous polymer dispersion as claimed in Claim 1.

Claim 12 (New): The graphic arts paper as claimed in Claim 11 wherein the sizing is applied as an engine size.

Claim 13 (New): The graphic arts paper as claimed in Claim 11 wherein the sizing is applied as a surface size.